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(19) (CA) **CANADIAN PATENT** (12)

(54) MICROWAVE OVEN HEATING CONTAINER

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(73) Granted to Litton Microwave Cooking Products
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No. OF CLAIMS 1

ABSTRACT OF THE DISCLOSURE


A cardboard container for use in heating foodstuffs in a microwave oven. The side walls of the container are shielded by aluminum foil. The top and bottom surfaces have printing in metallic ink to define shielded areas, partially shielded areas and unshielded areas. Areas of printing and graphics are used to define the partially shielded areas. The end flaps of the box are formed with an extra folded section adjacent the line of attachment to the box to provide elongated support members spacing the container from the base of the microwave oven.

The present invention relates to a cover or container for a tray of frozen food to be reheated in a microwave oven.

5 It is known to provide such containers with shielded or radiation-reflecting surfaces having apertures formed therein to provide partial transmission of radiation to the food to be heated. In U.S. Patent No. 3,547,661 issued December 15, 1970 to Stevenson there is shown such a container in which, additionally, areas are provided which are
10 partially transparent to microwave radiation. This is achieved by applying a partial covering of metal in a cross-hatched pattern, for example.

The present invention relates to a novel container of this type in which some of the shielded and partially
15 shielded areas also serve as a printed graphic display. Further, the container of this invention has doubly folded end panels which provide support members along the foot of the container to space it from the oven shelf and prevent bottom heating with possible damage to the oven floor.

20 Specifically, the present invention relates to a container for use in an electromagnetic-radiation oven for the selective heating of foods. The container comprises a box of bendable material, the side walls of the box being covered with material opaque to radiation. The top and
25 bottom surfaces of the box have areas printed in metallic ink to be at least partially opaque to radiation. The box has a pair of end flaps, each having a folded section adjacent the line of attachment of the flap to the box,



the folded sections forming elongated support members.

A particular embodiment of the invention will be described in conjunction with the accompanying drawing in which:

5 Figure 1 is a perspective view of a container with one end flap opened;

Figure 2 is a perspective view of a tray to be received in the container for heating, and

Figure 3 is a side view of the container.

DESCRIPTION OF THE PREFERRED EMBODIMENT

10 Referring to Figure 1, the container 10 is formed as a box, preferably from cardboard. The cardboard preferably has aluminum foil backing 11 on all sides except the top and bottom surfaces to provide shielding from electromagnetic radiation. The top surface has areas 12
15 covered in metallic ink, which are also shielded, areas 13 covered by printing in metallic ink, which are partially shielded, and areas 14, not shielded at all. The bottom surface, not shown, is substantially identical to the top with regard to the shielded, unshielded and partially shielded
20 areas. Each of these areas is arranged to lie directly below the corresponding area on the top surface.

It will be understood that unshielded areas 14 provide appropriate apertures to permit electromagnetic radiation to reach the foodstuffs in an amount appropriate to the
25 desired temperature rise. Partially shielded areas 13 provide a smaller temperature rise in the food stuffs

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thereunder.

If preferred the shielding on the sides of the container may also be provided by solid metallic ink graphics instead of the aluminum foil backing 11.

5 The end flaps 15 of the box are formed with double folds shown at 16 in order to provide a leg or support 17 (Figure 2) when the box is in assembled condition. Support 17 allows the package to be cooked spaced from the bottom shelf of the oven and, hence, avoid bottom heating and
10 possible damage to the tray.

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A container for use in an electromagnetic-radiation oven for the selective heating of foods comprising a box of bendable material, the side walls of the box being covered with a material opaque to radiation, the top and bottom surfaces of the box having areas at least partially opaque to radiation, said areas opaque to radiation being defined by metallic ink printing, the box having a pair of end flaps, each having a folded section adjacent the line of attachment of the flap to the box, said folded sections forming elongated vertical support members.



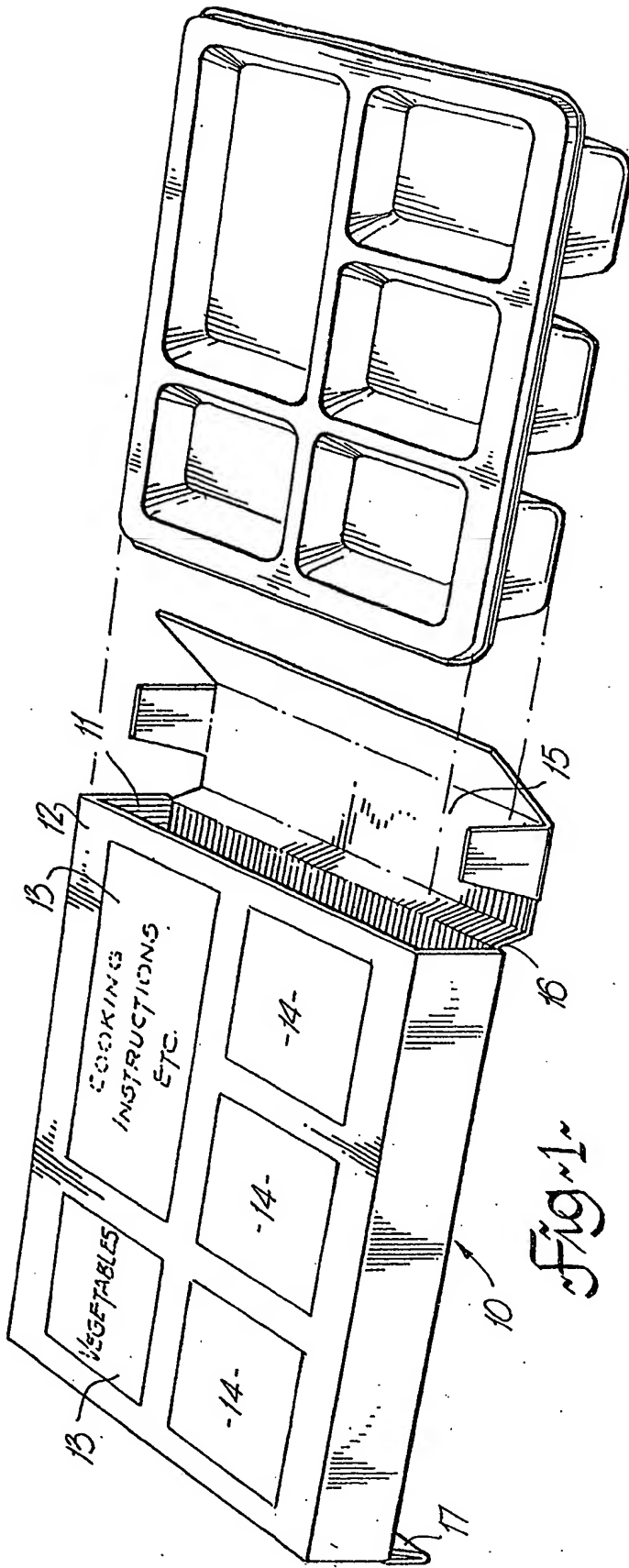


Fig. 1~

Fig. 2~

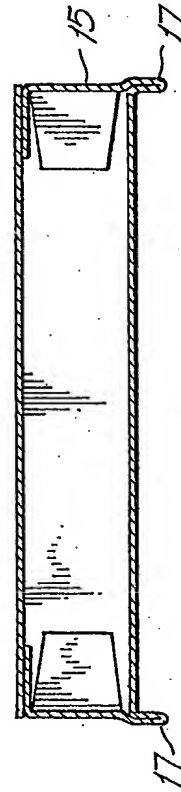


Fig. 3~

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